



U.S. Army Space
and Missile Defense
Command

2022 Redstone Update

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Mission

USASMDC develops and provides current and future global space, missile defense, and high altitude capabilities to the Army, joint force, and our allies and partners, to enable multi-domain combat effects; enhance deterrence, assurance, and detection of strategic attacks; and protect the Nation.

Mission Areas

ASCC/Operational Support

Service Activities

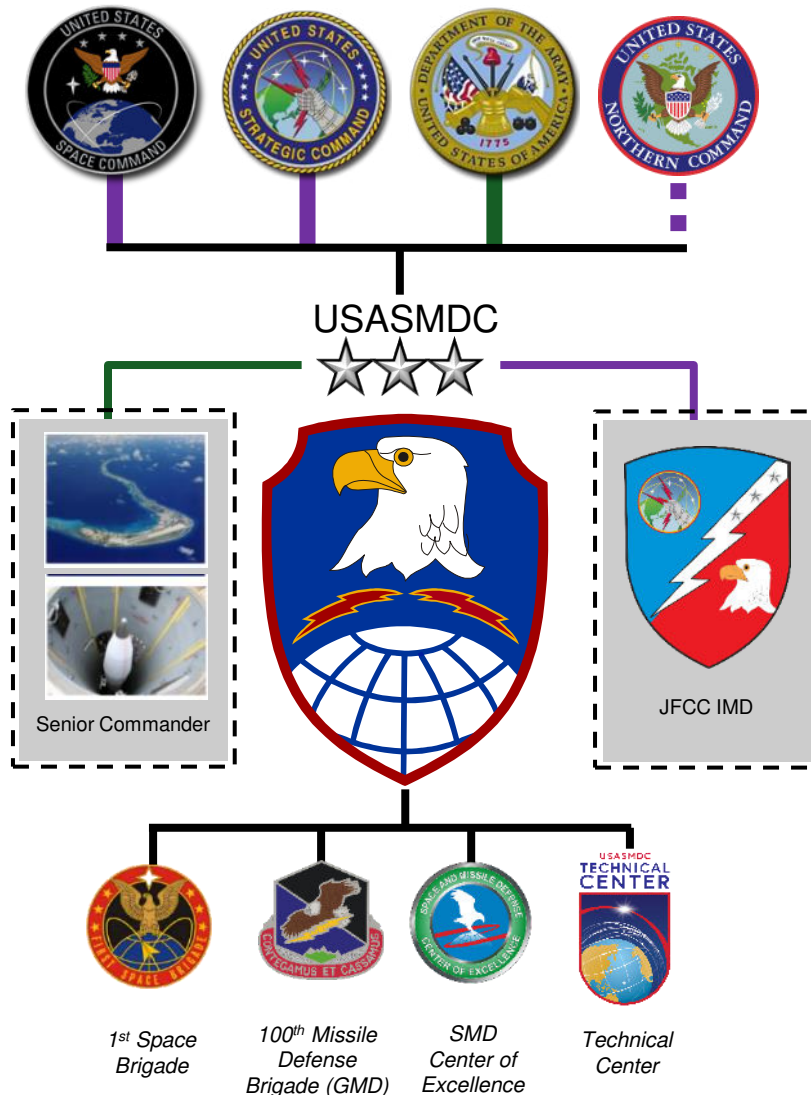
Army Propensity

Priorities

1. Accomplish our mission as a People First team of empowered, innovative, ready and resilient professionals
2. Provide trained and ready forces for space, missile defense, and high altitude missions
3. Conduct integrated planning and synchronized operations in the execution of our space and missile defense missions
4. Prepare for future conflict

Other CG Roles & Responsibilities

- Commander, Joint Functional Component Command for Integrated Missile Defense (JFCC IMD)
- Senior Commander for U.S. Army Garrison-Kwajalein Atoll and Fort Greely, AK
- Army Air and Missile Defense Enterprise Integrator
- Personnel Developer, Functional Area 40 Space Operations Officers





A Global Command

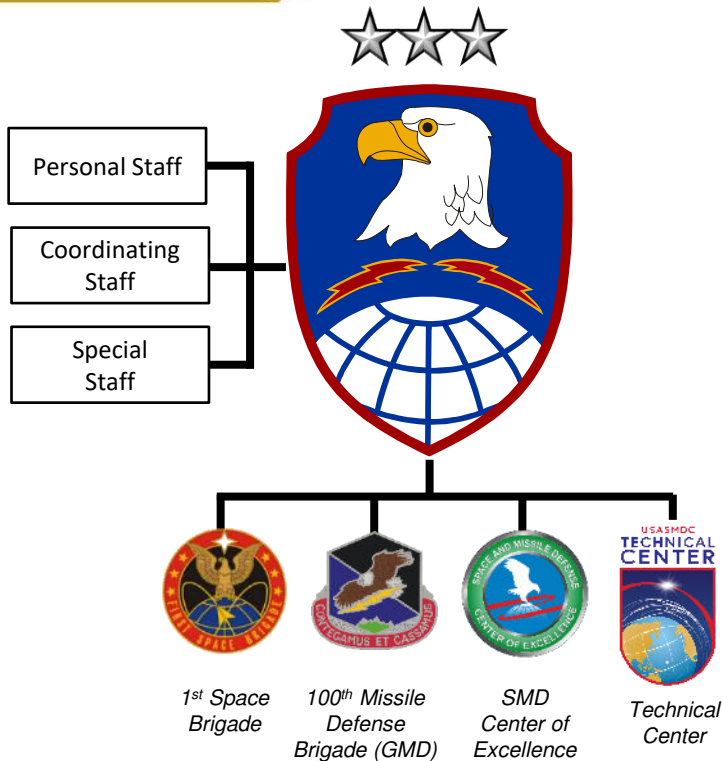


~ 2,600 Assigned Personnel
with over 600 operational forces forward stationed or deployed
Uniquely Organized, Geographically Well-Positioned, Regionally Aligned





Headquarters and Subordinate Elements



- Provides more than 600 operational forces, operationally deployed or forward stationed, on point for the Nation
- Delivers strategic and theater missile warning to deployed forces
- Provides friendly force tracking capability for 130,000+ devices and receives approximately 3.3 million reports daily
- Provides GEOINT and SIGINT support to the joint warfighter
- Provides space object identification and space situational awareness capabilities to USSPACECOM
- Leads Army Space Training Strategy lines of effort, providing training across the multi-component Army
- Provides Army astronauts for NASA duties





Why Army Space and High Altitude

Army space is *land-centric*, providing scalable and mobile, expeditionary, and forward-postured forces in contested and austere environments that are capable of keeping pace with maneuver forces in support of MDO. Army space integrates on-orbit and high altitude capabilities to provide effects through the air and space domains, and interdicts adversary space and high altitude capabilities in support of land and joint operations.

Pillars

- Integration of joint space capabilities to meet Army needs; e.g., APNT, communications, environmental monitoring, ISR, targeting
- Interdiction of adversary space capabilities; e.g., counter-SATCOM, counter-surveillance and reconnaissance, and NAVWAR

Examples of Enduring and Conceptual Army Space Capabilities



Ground mobile surveillance and assessment of space systems to negate adversary use of SATCOM

Future capabilities must include expeditionary, maneuverable platforms to remain relevant on the modern battlefield



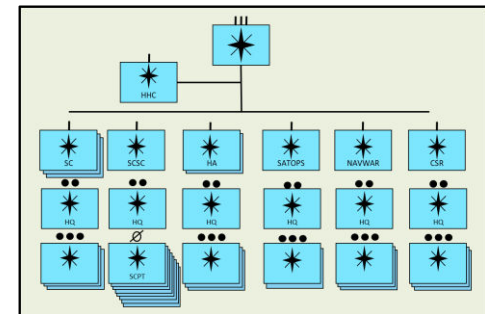
Ground-based directed energy platforms to conduct counter-surveillance and reconnaissance



High altitude balloon systems and long endurance, semi-autonomous, flight controlled platforms provide redundant space-like capabilities and increase resiliency of the overall space architecture



Munition-deployed PNT jammers (artillery or high altitude balloon deployed) disrupt adversary C2 and A2AD



Theater Strike Effects Group (TSEG): Theater Army force that integrates joint space capabilities and interdicts adversary space capabilities to set and shape the theater

Army Space amplifies the lethality and deterrent effect of our ground combat forces.





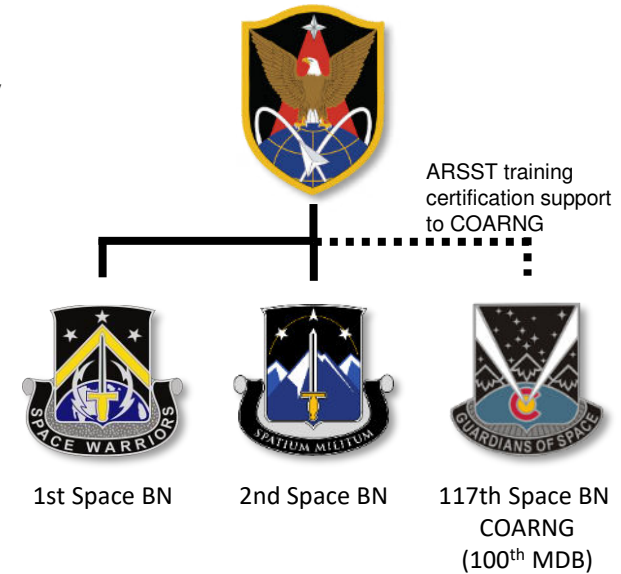
U.S. Army Space
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★ Fort Carson, CO

1st Space Brigade

- **Mission:** On order, provide trained and ready Soldiers prepared to deploy globally and execute missile warning, space control, and multi-domain space support to the warfighter, the Army, joint and combined forces, and civil authorities
- **Army's Only Space Brigade:** Unique, multicomponent brigade made up of Active Component, U.S. Army Reserve, and Colorado Army National Guard (ARNG) Soldiers, and Department of the Army Civilians
- **Forward Stationed Forces:** 19 locations | 13 time zones
- **Continuous Operations:** 40% of the brigade's personnel are involved in the execution of 24/7/365 missions
- **Space Combat Multipliers to Army / Joint / Combined Formations**



Missile Warning



5x – AN/TPY-2 Forward Based Mode Radars
4x – Joint Tactical Ground Stations

Space Control



10x – Space Control Detachments
(6x - AC, 4x - RC)
7x – Space Control Planning Teams

Space Support



30x – Army Space Support Teams (ARSST)
(6x - AC, 18x - RC, 12x - ARNG)





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★ Colorado Springs, CO

100th Missile Defense Brigade

- **The Nation's only defense against ICBM threats to the homeland**
 - Intercept and destroy an enemy warhead in its mid-course phase of flight, outside the Earth's atmosphere
 - On watch 24/7 – 365 days a year
- **Multi-component** – Active Duty, Colorado ARNG, Alaska ARNG, California ARNG



Missile Defense Element

Monitors ballistic missile defense sensors that detect incoming missiles and, on order, fires Ground-based Interceptors to destroy hostile missiles
Schriever AFB, CO

Fire Control Center

Executes tactical employment of Ground-based Midcourse Defense Interceptors
Fort Greely, AK

Detachment 1

Operates GMD launch facilities and support equipment in direct support of the MDE and FDC's missions
Vandenberg AFB, CA

IDT Security

Provides constant security to the In-flight Interceptor Communication System Data Terminal
Fort Drum, NY



“300 Protecting 300 Million”





Space and Missile Defense Center of Excellence



Capability
Development



Capability
Integration

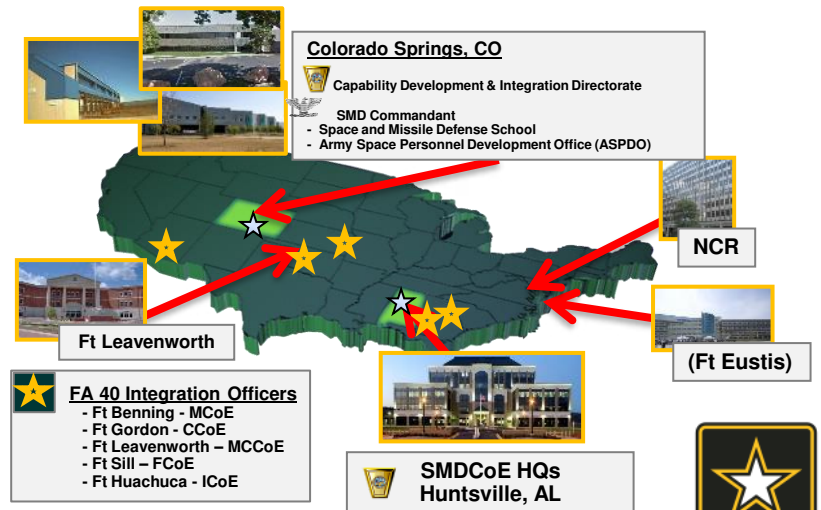


Training & Doctrine



Personnel
Development

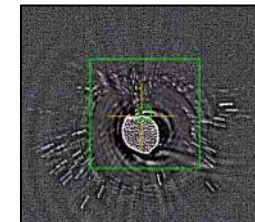
- USASMDC's generating force element – develops and sustains the operational Army's space and missile defense capabilities for employment by joint force commanders
- Space and Missile Defense School trains agile, adaptive, and ready space and missile defense Soldiers – a TRADOC Institute of Excellence
- Army Capability Managers integrate DOTMLPF-P activities across space, high altitude, and strategic missile defense equities
- Designs and documents space and missile defense organizations
- Performs wargames, experiments, concept integration and evaluation, and prototyping
- Provides modeling, simulation, and operational analysis for Army space, missile defense, high altitude, hypersonics, high energy laser, and cyberspace
- Conducts air and missile defense enterprise integration
- Executes life cycle management for Army FA 40 Space Operations Officers





Technical Center

- Conducts research, development, test and evaluation
- Executes space and missile defense research and development
 - High energy laser technologies to counter rockets, artillery, mortars, UAS, and other threats
 - Space-based capabilities in low earth orbit to directly enable next-generation Army communications and ISR tactical systems
 - High-power microwave technologies for counter-IED and counter-UAS applications
 - Test execution support for space, missile defense, and hypersonic technologies and ballistic missile targets
- Operates Ronald Reagan Ballistic Missile Defense Test Site
 - Executes space operations and space surveillance missions in support of USSPACECOM



**Delivering Technologies and Solutions
to Enable Warfighter Dominance**



U.S. Army Space
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- 60 years of experience successfully supporting ballistic missile testing and space operations
- Conducts 24/7 space operations to provide space situational awareness and protection of key space assets
- Nation's only strategic missile land impact site
- Flexible frequency spectrum and safety constraints

Reagan Test Site

Critical Missions

Unique Location

Unmatched Instrumentation

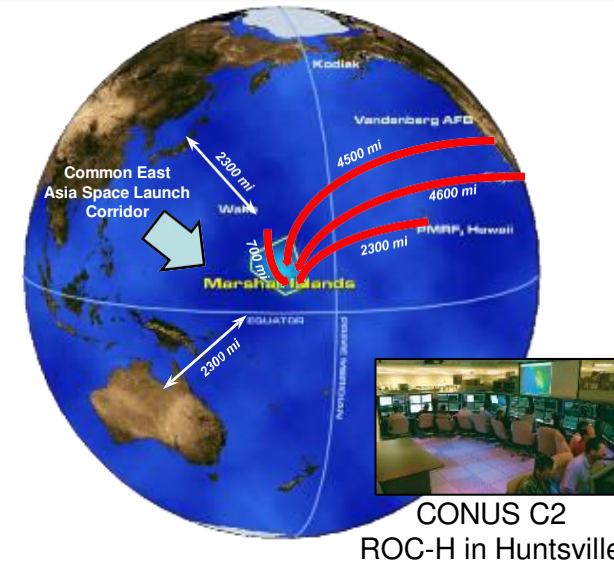
Operational Testing



Space Surveillance



Developmental Testing



Radar



ALTAR
UHF / VHF

TRADEX
L / S Band

ALCOR
C Band

MMW
Ka Band

GBR-P
X Band

MPS-36
C Band

Optics



**Super
RADOT**

Ballistic

Fixed

MWIR



Mobile Range Safety
and Telemetry



Ground Range Safety
and Telemetry





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Army Astronauts

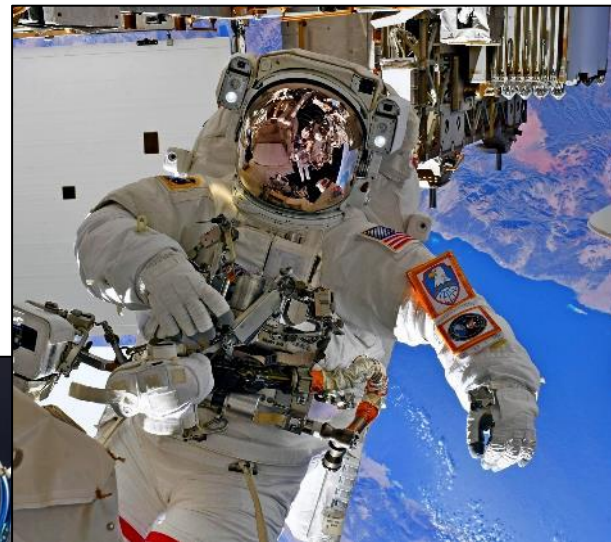
COL (Ret.) Patrick
G. Forrester
*Chief of the
Astronaut Office*



COL (Ret.) R. Shane
Kimbrough



COL (Ret.) Mark T.
Vande Hei



Left to right:

LTC Frank Rubio, M.D.

LTC Anne C. McClain

COL Andrew "Drew" R. Morgan, M.D.

Since 1976, 19 Soldiers have completed astronaut training.





Takeaways

- USASMDC provides trained and ready space and missile defense forces and capabilities to combatant commanders

Unique forces, capabilities, and missions:

- ☐ Ground-based Midcourse Defense provides 24/7/365 homeland defense against long-range ballistic missiles
 - ☐ Supports and trains the joint force on the integration of space-based capabilities in support of the warfighter
 - ☐ Provides friendly force tracking of all capable devices for DOD and partners
 - ☐ Protects our deployed forces with near real-time theater missile warning and early detection of long-range ballistic missile threats to the homeland
 - ☐ Forward-based forces postured to support multi-domain operations in INDOPACOM, CENTCOM, and EUCOM AORs
- As the Army's force modernization proponent for space, global missile defense, and high altitude, USASMDC is building tomorrow's force
 - Our cutting-edge research is developing technologies to meet today's requirements and future needs in directed energy, space, cyberspace, hypersonics, and integrated air and missile defense

Enabling the Joint Warfighter Today
While Developing the Forces and Capabilities of Tomorrow

